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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,124	01/20/2004	Randy T. Pike	7162-0118	4099
39207	7590	01/13/2005	EXAMINER	
SACCO & ASSOCIATES, PA P.O. BOX 30999 PALM BEACH GARDENS, FL 33420-0999			ERDEM, FAZLI	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/762,124

Applicant(s)

PIKE, RANDY T.

Examiner

Fazli Erdem

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-13, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 14, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-10 allowed.
2. Claims 14, 15 and 18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11, 12, 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al. (6,766,082) in view of Uno et al. (6,406,196) further in view of Howard (5,114,750)

Regarding Claims 11, 12, 16 and 17, Hirabayashi et al. disclose a waveguide type optical device and manufacturing method therefor where optical structure 1-4 is embedded in ceramic substrate 1-1 inside a trench formed inside ceramic substrate 1-1. Hirabayashi et al. fail to disclose the required makeup of the optical structure/fiber and the required hexane coating. However, Uno et al. disclose an optical device and method for producing the same where in Figs 2 and 3, the required makeup of the optical structure/fiber is disclosed. Furthermore, Howard discloses tungsten and tungsten nitride

coatings for metals and ceramics where in column 5 lines 45-65 the required hexane coating is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required makeup of the optical material and hexane coating in Hirabayashi et al. as taught by Uno et al. and Howard respectively, in order to have an optical semiconductor device with increased performance.

5. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al. (6,766,082) in view of Uno et al. (6,406,196) further in view of Johnson et al. (2003/0039843).

Regarding Claim 13, Hirabayashi et al. disclose a waveguide type optical device and manufacturing method therefor where optical structure 1-4 is embedded in ceramic substrate 1-1 inside a trench formed inside ceramic substrate 1-1. Hirabayashi et al. fail to disclose the required makeup of the optical structure/fiber and the required calcium coating. However, Uno et al. disclose an optical device and method for producing the same where in Figs 2 and 3, the required makeup of the optical structure/fiber is disclosed. Furthermore, Johnson et al. disclose a photoactive coating, coated article and method of making same where in claims 34 and 41 the required calcium coating is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required makeup of the optical material and calcium coating in Hirabayashi et al. as taught by Uno et al. and Johnson et al. respectively, in order to have an optical semiconductor device with increased performance.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FE  
January 7, 2005

  
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SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800